Making a Map to Home Energy Savings

RegenAll's Navigator Program helps homeowners get a head start on energy efficiency.

BY ANDREW PAULS-THOMAS, DIRECTOR OF ENERGY SOLUTIONS WITH REGENALL



The Cramer family bought their School Lane Hills home because it was built with intention. Like many homes in School Lane Hills, their home boasts character, but is aging, including the mechanicals such as the original gas furnace that came with the home. In an effort to learn more about how to improve energy efficiency in their home, the Cramers signed up for RegenAll's Home Energy Navigator Program, a free service designed to help Lancaster County homeowners navigate the transition to healthier and more efficient homes.

Andrew Pauls-Thomas, the director of the Navigator Program, visited the Cramers' home on a sunny day in July. When Bree Cramer met him in the foyer, Andrew began by asking a few questions about her home, trying to better understand the Cramers' goals, areas of discomfort, and which appliances soon needed to be replaced. Bree wanted to explore replacement options for their aging furnace and also had concerns about one of the bedrooms in their home that is consistently colder than the rest of the house in the winter and warmer in the summer.

As they walked through the home, Andrew laid out the ideal scenario for making a home more energy efficient. First, it's best to start with evaluating insulation and air-tightness of a home to make sure the house is keeping conditioned air within the structure. The most critical areas to focus on are the attic and where the first floor meets the foundation of the house. After sufficiently insulating and sealing a home, the homeowner can take on other projects like a new HVAC system, which will need to be designed based on the size and level of insulation in the home.

"There are many things you can do to make a positive impact on our local climate," Andrew says. "A lot of people first think of things like recycling and, while this makes a difference, reducing the energy we use in our homes can make a much larger and longer-lasting impact for the environment and for our wallets. Insulation is usually the best place to start."

Overall, the Cramer home appeared to be sealed up well, with its double-pane replacement windows and doors both in good shape. Next, they took a look at the attic and the basement. Both spaces had insulation in place, but Andrew offered to connect them with an energy auditor who could conduct thermal imaging tests with special equipment to determine if more insulation was needed. The energy auditor could also troubleshoot the uncomfortable bedroom on the second floor.

While in the basement, Bree and Andrew discussed options for replacing the aging gas furnace. Andrew recommended installing a heat pump, as they are three to four times more efficient than gas furnaces and conventional electric heat. Though, in the past, older heat pump models could only heat down to outdoor temperatures of 40 degrees Fahrenheit, contemporary models now have the capacity to heat when outdoor temperatures are in the single digits. Andrew explained that the same heat pump technology now exists for water heaters, which are also 3 to 4 times more efficient than conventional electric water heaters.

After the tour of the home, Andrew provided a report to the Cramers, detailing recommendations based on their goals and their home's needs. The top recommendations were to hire an energy auditor and to start getting quotes for a heat pump system before the gas furnace failed. To better serve homeowners in the area, RegenAll is building out a contractor network and can provide recommendations for home energy retrofits based on the experiences of people in their network.



Bree Cramer discusses the energy efficiency of her home with Andrew Pauls-Thomas, Director of Energy Solutions with Regenall.

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>
> BREE CRAMER

"The first step in these types of projects is often the hardest. But, with RegenAll's Navigator Program, taking the first step was easy. Andrew visited the home and listened to our goals and problems, gave us information on the things we knew we didn't know, and offered simple, yet effective solutions we could pursue," Bree said. "Having a conversation with RegenAll is a great first step for any homeowner in the neighborhood who wants to make sustainability part of their home renovations."

To learn more about the Navigator Program and sign up for a free consultation, visit www.regenall.org/navigator.

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